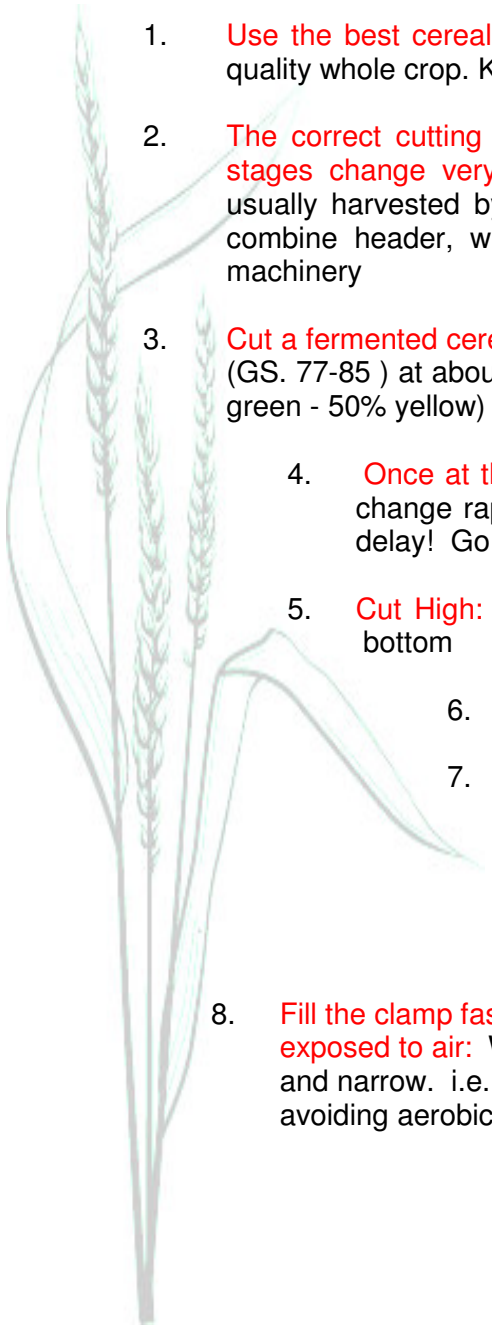
WHOLE CROP/ARABLE SILAGE TOP TIPS FOR SUCCESS

Why is whole crop becoming increasingly popular in the dairy sector?

- Increased Dry Matter Intakes from a second or third forage
- More milk per cow (8-10% increase in yield)
- Option for more efficient production with more litres from forage
- Higher energy levels with 30-35% starch
- More long fibre to stimulate rumen - "Scratch Factor" (see reverse)
- Alternative use for cereal crops lower cereal prices
- Well suited areas of the UK where maize production is marginal
- Ideal entry for an early grass re-seed

Top 10 tips for making good whole crop silage from cereals.



1. Use the best cereal crops: A poor crop of wheat or barley will make poor quality whole crop. Keep the crop free from weeds and disease

2. The correct cutting date is critical for good whole crop silage and growth stages change very quickly at harvest. Fermented whole crop wheat is usually harvested by using a precision (short) chop harvester fitted with a combine header, while grain for crimping is processed using specialised machinery

3. Cut a fermented cereal whole crop when the grain is at the soft/cheesy stage: (GS. 77-85) at about 30-40% DM There will still be green in the stems (50% green - 50% yellow)

4. Once at the correct growth stage DON'T DELAY: Growth stages change rapidly and DM can change by 2% per day so cut without delay! Go early rather than late

5. Cut High: Cutting height of about 4 inches leaving rubbish in the bottom

6. Short chop length: to aid consolidation

7. Use quick action POWERSTART silage inoculant to ensure the whole crop is fermented as quickly as possible: POWERSTART is fast acting - preserving more of the nutrients and producing a stable whole crop. More sugars, more protein and less ammonia give a more palatable forage

8. Fill the clamp fast, evenly and roll as you fill, minimising the length of time exposed to air: Work into thin layers and roll well. Clamps should be long and narrow. i.e. narrow face for faster feed out and minimal waste, avoiding aerobic spoilage.

9. Roll for half an hour maximum in the evening and sheet down every night: It takes just 20 minutes to use up all the oxygen in silo, then fermentation begins if no more air is getting in

10. Completely seal the silo and weight down shoulder and top sheets as soon as possible

What is "scratch" factor?

The rumen is full of bacteria that break down and digest fibre (cellulose)

The pH of the rumen must be between 5.5 and 6.5 for the bacteria to survive and function properly.

If pH drops to below this then the bacteria will not work which leads to an increasingly acid rumen and eventually leads to acidosis, poor appetite and poor intakes.

Long fibre in the diet (straw/grass/silage) stimulates the cow to chew the cud. It does this by ***scratching*** the rumen wall causing muscle contraction and the cow to regurgitate her food (chew the cud).

Chewing the cud causes the cow to produce large amounts of saliva.

Saliva contains Sodium Bicarbonate, which buffers the rumen helping to keep the pH at 5.5 - 6.5.

Forage such as cereal whole crop containing some "long fibre" which stimulates the rumen in this way is said to have a higher "scratch factor"

A typical Wholecrop analysis - fermented

Dry Matter	30-40%
ME	9 – 11MJ/kg
Crude Protein	9 –11%
pH	4.0 – 4.6
Ammonia	5 – 8%

Estimated yield:

10-15 tonnes per acre depending on variety, cutting height, dry matter, winter or spring sown seeds.